



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <b>(51) International Patent Classification <sup>6</sup> :</b><br><b>C12N 15/82, C07K 14/08, C12N 15/62, A01H 5/00</b>  | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 99/58697</b><br><b>(43) International Publication Date:</b> 18 November 1999 (18.11.99)   |
| <b>(21) International Application Number:</b> PCT/SG99/00012<br><b>(22) International Filing Date:</b> 12 February 1999 (12.02.99)<br><br><b>(30) Priority Data:</b><br>PCT/SG98/00035 12 May 1998 (12.05.98) SG<br><br><b>(71) Applicant (for all designated States except US):</b> INSTITUTE OF MOLECULAR AGROBIOLOGY [SG/SG]; 1 Research Link, Singapore 117604 (SG).<br><br><b>(72) Inventor; and</b><br><b>(75) Inventor/Applicant (for US only):</b> DING, Shou-Wei [CN/SG]; The National University of Singapore, 1 Research Link, Singapore 117604 (SG).<br><br><b>(74) Agent:</b> ELLA CHEONG & G. MIRANDAH; P.O. Box 0931, Raffles City, Singapore 911732 (SG). |           | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>With international search report.</i> |
| <b>(54) Title:</b> DISEASE RESISTANT TRANSGENIC PLANTS  |           |   |
| <b>(57) Abstract</b><br><p>Transgenic plants transformed with a cucumovirus 2b gene or active fragment thereof, or an Avr gene having an inactive cell death domain exhibit resistance to diseases caused by infectious pathogens, such as viruses. Expression of the genes causes activation of hypersensitive response and expression of pathogenicity-related proteins in plants that are incapable of such a response to certain pathogens. Transformation of a wide variety of plants with expression vectors in which such a gene is operably linked to a plant-active promoter renders the plant resistant to pathogenic infection.</p>                            |           |   |